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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,070	12/20/2001	Alan John Brasier	MUR-8582US	8608
25280	7590	12/02/2004		
MILLIKEN & COMPANY 920 MILLIKEN RD (M-495) PO BOX 1926 SPARTANBURG, SC 29304			EXAMINER EINSMANN, MARGARET V	
			ART UNIT 1751	PAPER NUMBER

DATE MAILED: 12/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/019,070

Applicant(s)

BRASIER ET AL.

Examiner

Margaret Einsmann

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 10/8/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1,3,6,7,14-23,29,31,52,53,55 and 56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1,3,6,7,14-23,29,31,52,53,55 and 56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/8/04 has been entered.

Applicant's amendment filed 10/8/04 have been entered and applicant's remarks carefully considered. The pending claims are 1,3, 6,7,14-23, 29, 31, 52,53,55 and 56.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 6,7,14-23, 29, 31, 52,53,55 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art tennis balls "Milliken Standard Yellow Felt (std. F/Y) and "Milliken High Visibility Yellow Felt (Hi. Viz. F/Y)" on page

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21 of the specification in view of Reinecke, "Woolbleiche etc., Reinert, US 5,074,885 and Schmidt, US 3,551,087 The Milliken ball is a conventional fluorescent dyed tennis composed of a wool/synthetic felt glued to a rubber sphere as claimed. The difference between the Milliken balls and the claimed invention is the color characteristics of lightness and reflectance. The three secondary references all teach that wool is bleached before dyeing in order to improve its whiteness. Reinecke states on page 5 section 3.1, "Wool which is bleached oxidatively or reductively does actually become whiter on exposure to light." Accordingly Reinecke teaches how to make wool whiter, that is brighter. Schmidt likewise teaches that "It is often necessary or desirable to bleach the proteinaceous fibrous material so that the dyes may have full action." Reinert states at col 1 lines 7-12, "The present invention relates to a process for the dyeing of wool to produce lightfast, very bright, brilliant shades. In the dyeing of wool, it is often required to subject the wool material to be dyed to a bleaching operation for the dyes to become fully effective

It would have been obvious to the skilled artisan that the process of producing a brighter color on wool containing fabrics has been known. The process is to bleach the wool and dye with an acid dye. Applicant states in the specification at page 5 line 7, "The need to bleach a yellowish-fiber (natural wool) prior to or during is counter-intuitive, but we have found that the performance of the dye is greatly enhanced by this step. " One skilled in the art knows that not only is said step not counter-intuitive, it has been done in the prior art for many years, as Schmidt states that it may be necessary for the wool dyes (that is acid dyes as applicant uses) to have full action. (col 1 line 33) and

Reinert states that a bleaching process is often required for dyes to be fully effective. Accordingly, the skilled artisan knows how to improve the tennis ball Milliken to achieve a brighter, more reflective tennis ball by improving the whiteness of the substrate by bleaching as described in the three secondary references. A result which is expected is prima facie obvious.

Arguments Maintained from the Final Rejection

Applicant argues that Schmidt dyes a pale blue and that the teaching is not for dyes generally. The examiner respectfully disagrees with this analysis of the reference. Applicant is arguing a particular example. A true reading of the reference discloses that Schmidt is teaching a brightening of the wool simultaneously with dyeing whatever the color. See col 5 lines 57 e seq. for example. Note also a later patent of Schmidt, U.S. 3,912,447 which states, "Until recently natural polyamide had to be subjected to bleaching prior to dyeing in order to achieve the necessary brilliance. Applicant states that nothing in Schmidt would motivate one to bleach wool when it is being dyed yellow with the expectation of the chroma, lightness and reflectance would be improved. In the first place, applicant claims a chroma which is the same as the Milliken tennis ball. In the second place, Schmidt teaches that for the dyes to fully act, bleaching before dyeing is necessary. Applicant next states that none of the references teaches that one should remove the yellow from wool before dyeing it yellow. The natural "yellow" of wool is dull; wool must be whiter (brighter) before dyeing pale shades. Applicant states that natural wool is yellow. In response to this statement, Arifoglu et al., US 5,264,001, col 1 lines 49-52 states, "Scoured wool varies in shade from the light cream of wools

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considered to have good color to discolored urine-stained wools and the near blacks of heavily pigmented wool." Accordingly, the natural color of wool must be brightened when applying light or pale shades if one wants to improve the brightness thereof."

Applicant challenges the examiner to state on the record why the differences between physical characteristics of the claimed tennis balls and those of Milliken are not significant. Applicant challenges the examiner as follows: The examiner must show that the variation is not significant. In response to this, the examiner stated in the previous response that the greatest difference in the measurements is 10 units, which is the reflectance (119.8 vs 129.9) is 7.69% which is not significant. In response to applicant's continued challenge, the examiner quotes from US 5,470,058, which is a patent directed to the same art area as applicant is claiming, "High Visibility Inflated Game Ball." Col 9 first full paragraph states, "The maximum reflectance of the fluorescent yellow ball was in the 500-550 nm range, while the maximum fluorescence of the fluorescent orange and red balls was in the 600-650 nm range. The human eye is more sensitive to light in the 500-550 range than in the 600-650 range. The 1-12% reflectance of the standard orange ball as compared to the fluorescent red ball in the range of 500-600 is deemed insubstantial.... " Accordingly, the difference in reflectance of 8% and less than 3% in lightness are between the claimed tennis ball and the Milliken ball are deemed insubstantial. The claimed chroma need not be discussed because the chroma as claimed is found in the Milliken High Visibility tennis ball. MPEP 716.02(b) states, The evidence relied upon should establish "that the differences in results are in fact unexpected and unobvious and of both statistical and practical significance." Ex

Parte Gelles, 22 USPQ2d 1418, 14319 (Bd. Pat. & Inter. 1992). The MPEP puts the burden on applicant, not on the examiner.

In response to the statement that the specification does not show how the comparison was done, applicant points to how the reflectance parameters were measured. This is not persuasive. There is no specific data how the prior art balls were constructed or dyed, not is there any evidence that more than one ball was compared in order to provide a statistical sample of the prior art balls and the inventive balls. A direct comparison with the reference is required. Said comparison must be commensurate in scope with the claims. One exemplification of the claimed tennis balls will not overcome the rejection. Applicant is directed to M.P.E.P716.02 (d) and (e) for the requirements of comparisons which will overcome a prima facie case of obviousness. Objective evidence of unobvious results must be commensurate in scope with the claims. *In re Prater*, 162 USPQ 541; *In re Tiffin*, 172 USPQ 292; *In re Linder*, 172 USPQ 356; *In re Greenfield*, 197 USPQ 227.

Where unobvious results are relied upon as a basis for patentability, a proper comparative showing is a minimum requirement. *In re Eisenhut*, 114 USPQ 287. The nonobviousness of a broader range can be supported by evidence based on results of a narrower range if one of ordinary skill in the art would be able to determine a trend in the exemplified data which would allow the artisan to reasonably extend the probative value thereof. *In re Kollman*, 595 F.2d 48, 201 USPQ 193 (CCPA 1979). Since only one ball was compared, there is no way to determine a trend in the data provided.

Response to Amendment Filed with RCE

Applicant has stated that the Milliken high visibility prior art product has higher chroma values but not the desired high lightness values. In response to this argument, the prior art teaches that the wool must be lightened or bleached before dyeing in order to achieve a higher lightness value. See above rejection and arguments. Accordingly, by applying the same amount of fluorescent yellow dye to a lightened substrate, applicant has achieved a lighter, higher visibility ball. This is not unexpected because it flows from the teachings of the prior art.


Applicant has provided three exhibits to show that enhanced visibility is a significant property for a tennis ball. Any evidence used to rebut a prima facie case of obviousness must be in declaration form, and the three exhibits presented are not in declaration form. Applicant states that the Ultra High V balls have been endorsed by Tim Henman. In order to show this, applicant has enclosed an advertisement. Is not Tim Henman paid for his endorsement? How can a paid endorsement be used to show the patent office that the brightness of the ball is unexpected? The data in the specification demonstrates that the ball is brighter than the Milliken ball that it replaced. However, the prior art teaches that a bleached wool will be brighter than an unbleached wool dyed with the same dye. Both the prior art hi-bis ball and the claimed ball are dyed with a fluorescent yellow dye. Applicant states that the prior art does not teach that reduction bleaching will enhance visibility. A bleached wool product is a brighter wool product, regardless of how it has been bleached, and the prior art teaches that bleaching wool before dyeing will enhance brightness. Regarding applicant's arguments about the ball being contacted with a partitioning agent in the method, it is

not relevant to the claimed product unless applicant claims a ball which contains said partitioning agent.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret Einsmann whose telephone number is 571-272-1314. The examiner can normally be reached on 7:00 AM -4:30 PM M-Th and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on 571-272-1316. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-0994.


Margaret Einsmann
Primary Examiner
Art Unit 1751

November 29, 2004